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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/955,744

09/14/2001

Vladimir Pogrebinsky

P-2339-US

9488

7590

11/03/2005

Eitan Law Group  
C/O LandonIP, Inc.  
Suite 450  
1700 Diagonal Road  
Alexandria, VA 22314

EXAMINER

PHAN, MAN U

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/955,744	<b>Applicant(s)</b> POGREBINSKY ET AL.	
	<b>Examiner</b> Man Phan	<b>Art Unit</b> 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-9 is/are rejected.
- 7) ☒ Claim(s) 3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment and Argument***

1. This communication is in response to applicant's 08/16/2005 Amendment in the application of Pogrebinsky et al. for a "Flow control method and apparatus" filed 09/14/2001. This application is a continuation of PCT/IL00/00157 filed 03/14/2000, and claims priority from Provisional Application 60124371 filed 03/15/1999. The proposed amendment to the claims and response have been entered and made of record. Claims 1-5 have been amended, and new claims 6-9 have been added. Claims 1-9 are pending in the present application.

The amended paragraphs in Abstract correct the status of the legal phraseology. Therefore, examiner has withdrawn the Objections of record to the specification.

2. Applicant's amendment and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C. 103 as discussed below. Applicant's argument with respect to the pending claims have been fully considered, but they are not persuasive for at least the following reasons.

3. In response to applicant's argument that the combination of Kikuchi et al. (US#6,614,763) and Berthaud et al. (US#5,815,492) fails to present a prima facie case of obviousness. In response, it has been held that a prior art reference must either be in the field of applicants endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). It is not

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necessary that a “prima facie” case of unpatentability exist as to the claim in order for “a substantial new question of patentability” to be present as to the claim. Thus, “a substantial new question of patentability” as to a patent claim could be present even if the examiner would not necessarily reject the claim as either fully anticipated by, or obvious in view of, the prior art patents or printed publications. As to the importance of the difference between “a substantial new question of patentability” and a “prima facie” case of unpatentability see generally *In re Etter*, 756 F.2d 852, 857 n.5, 225 USPQ 1, 4 n.5 (Fed. Cir. 1985). Also, See MPEP § 2141.01(a) for a discussion of analogous and nonanalogous art in the context of establishing a prima facie case of obviousness under 35 U.S.C. 103. See MPEP § 2131.05 for a discussion of analogous and nonanalogous art in the context of 35 U.S.C. 102. 904.02.

Applicant asserts that there is no motivation to combine the prior art as proposed in the office action, *Kikuchi et al.* (US#6,614,763) in view of *Berthaud et al.* (US#5,815,492), i.e. In response, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was

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made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. *In re McLaughlin*, 443, F.2d 1392; 170 USPQ 209 (CCPA 1971).

***Claim Rejections - 35 U.S.C. 112, first paragraph***

4. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation of "*measuring one-way delays in the network, and time selected parameters relative to these measurements*" (claim 8, line 2) has no support in the disclosure.

***Claim Rejections - 35 USC ' 112, second paragraph***

5. Claims 1, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites limitation "providing said network available bandwidth" in line 8.

There is insufficient antecedent basis for this limitations in the claim.

Claim 7 recites limitation "the available bit rate" in line 2. There is insufficient antecedent basis for this limitations in the claim.

***Claim Rejections - 35 USC ' 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 2, 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (US#6,614,763) in view of Berthaud et al. (US#5,815,492).

With respect to claims 1 and 4, Kikuchi et al. (US#6,614,763) and Berthaud et al. (US#5,815,492) disclose a novel system and method for adjusting an available bandwidth in a communication network utilizing probing packets to estimate available bandwidths of network

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path, according to the essential features of the claims. Kikuchi et al. discloses in Figs. 15, 16 the functional block diagram and flow chart illustrated the reciprocative path performance measurement processing, in which a sending unit sends a plurality of probing packets (*test packets for measuring the available bandwidth*) at *equi-intervals* into a network path; a reception unit receives the plurality of probing packets; a measurement unit measures transmission time  $T(i)$  from the start of sending of each of the probing packets in the sending step up to the completion of reception of each of the probing packets in the reception step (e.g. *for calculating the bit rate in accordance with the currently available bandwidth*); and a performance estimation unit estimates an available bandwidth of the network path from correlations in difference between measurement packet transmission times  $T(i)$  measured in the measurement step (Col. 1, lines 64 plus, and Col. 20, lines 32 plus).

However, Kikuchi et al. does not disclose expressly the step of adjusting packet transmission bit rate in accordance with the available bandwidth for controlling network bandwidth. In the same field of endeavor, Berthaud et al. discloses a method and system of dynamically adapting access to a packet switching communication network including a *dynamic bandwidth adjustment mechanism* which continuously monitor the mean bit rate of the signal source and the loss probability of the connection, comprising the steps of: measuring the mean bit rate of traffic from the source node, controlling the flow of traffic from the source node into the network by means of a leaky bucket control circuit, measuring the loss probability of packets introduced into the network by the leaky bucket control circuit, filtering the loss probability measurements, defining adaptation regions on the values of the simultaneous mean bit rate and loss probability measurements, in response to pairs of the mean bit rate and loss

probability measurements falling outside the adaptation regions, requesting a modification of the bandwidth allocated to connections from the source node (*adjusting the bandwidth based on the measurement, by changing packet transmission bit rate*) (Col. 5, lines 10 plus and Col. 17, lines 21 plus).

With respect to claim 2, Kilkuchi et al. further teach in Figs. 11-12 the flowcharts illustrated of the available bandwidth estimation processing using the monotonically increasing or decreasing the measurement packet sending speed (*transmission bit rate*), to see whether an available bandwidth of a network path exceeds the transfer speed X (bps) to thereby estimate the available bandwidth of the path (Col. 15, lines 29 plus and Col. 21, lines 7 plus).

Regarding claims 6-9, Berhaud teaches the Bandwidth Measurement and Adaptation for adapting access to a packet switching network including a dynamic bandwidth adjustment mechanism which continuously monitors the mean bit rate of the signal source and the loss probability of the connection. These values are filtered to remove noise and then used to test whether the values fall within a pre-defined acceptable adaptation region in the mean bit rate, loss probability plane. Values falling outside of this region trigger bandwidth adaptation procedures which, in turn, result in acquiring a new connection bandwidth, and determining new parameters for the adaptation mechanism (Fig. 4; and the Abstract).

One skilled in the art would have recognized the need for effectively and efficiently adjusting the bandwidth based on communication bit rate, and would have applied Berthaud's teaching of a dynamic bandwidth adjustment mechanism into Kikuchi's novel use of a the estimating present network bandwidth utilizing test packets for measuring the available bandwidth. Therefore, It would have been obvious to a person of ordinary skill in the art at the



time of the invention was made to apply Berthaud's dynamic bandwidth estimation and adaptation in high speed packet switching networks into Kikuchi's method of and apparatus for measuring network communication performances, as well as computer readable record medium having network communication performance measuring program stored therein with the motivation being to provide a method and system for measuring network bandwidth.

***Allowable Subject Matter***

9. Claims 3 and 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C.112, 2<sup>nd</sup> paragraph, set forth in this office action, and if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein monitoring including requesting for network available bandwidth; restoring transmission bit rate of the content data to the first bit rate, and receiving network available bandwidth; wherein the transmission of the content data over the network is over a path of a network having a predetermined maximum bandwidth, and the step of detecting an available bandwidth of said network includes transmitting the content data at a first bit rate, transmitting at least one test data packet in an increased bit rate for detecting at least one congestion in the path; and transmitting the content data at the bit rate and receiving a result of the detection, as specifically recited in the claims.

*Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Gringeri et al. (US#6,108,382) is cited to show the method and system for transmission of video in an ATM network.

The Hinchley et al. (US#6,490,250) is cited to show the elementary stream multiplexer.

The Zhang et al. (US#6,181,711) is cited to show the system and method for transporting a compressed video and data bit stream over a communication channel.

The Zhang et al. (US#6,891,854) is cited to show the system and method for transporting a compressed video and data bit stream over a communication channel.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

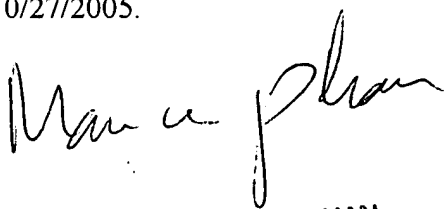
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

10/27/2005.



MAN U. PHAN  
PRIMARY EXAMINER